

DOCKET NO.: MSFT-2851/306821.01

PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Shankar Pal, et al.

Confirmation No.: Not Yet Assigned

Application No.: 10/693,158

Group Art Unit: 2171

Filing Date: October 24, 2003

Examiner: Not Yet Assigned

For: **SYSTEM AND METHOD FOR STORING AND RETRIEVING XML DATA
ENCAPSULATED AS AN OBJECT IN A DATABASE STORE**

DATE OF DEPOSIT:

January 27, 2005

I HEREBY CERTIFY THAT THIS PAPER IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL, POSTAGE PREPAID, ON THE DATE INDICATED ABOVE AND IS ADDRESSED TO THE UNITED STATES PATENT AND TRADEMARK OFFICE, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450.

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Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR § 1.56 and in accordance with 37 CFR §§ 1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 CFR § 1.56(b).

- ☒ In accordance with § 1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of

the above identified application as set forth in § 1.491, before the mailing date of a first Office Action on the merits of the above-identified application, or before the mailing date of a first Office Action after the filing of request for continued examination under § 1.114, no additional fee is required.

- ☐ In accordance with § 1.97(c), this Information Disclosure Statement is being filed after the period set forth in § 1.97(b) above but before the mailing date of either a Final Action under § 1.116 or a Notice of Allowance under § 1.311, or before an action that otherwise closes prosecution in the application, therefore:

☐ Certification in Accordance with § 1.97(e) is attached; or

☐ The fee of \$180.00 as set forth in § 1.17(p) is attached.

- ☐ In accordance with § 1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311 but before, or simultaneously with, the payment of the Issue Fee, therefore included are: Certification in Accordance with § 1.97(e); and the submission fee of \$180.00 as set forth in § 1.17(p).

- ☒ Copies of reference numbers **1 thru 22** listed on the attached Form PTO-1449 are enclosed herewith.

- ☒ Copies of reference numbers **23 thru 44** on the attached Form PTO 1449 are not required to be submitted pursuant to 37 CFR § 1.98(a)(2)(i).

- ☐ Copies of references - are not being submitted because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application number , filed for which a claim for priority under 35 U.S.C. § 120 has been made in the instant application.

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PATENT

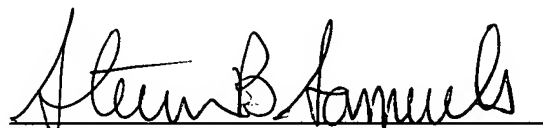
There are no listed references which are not in the English language.

Please charge any deficiency or credit any overpayment to Deposit Account No. 23-

3050. This form is submitted in duplicate.

Date:

Jan. 27, 2005



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| Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office | | Docket No. MSFT-2851/306821.01 | Application No. 10/693,158 |
| | | Applicant Shankar Pal, et al. | |
| | | Filing Date October 24, 2003 | Group Not Yet Assigned |
| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) | | | |
| | 1 | Andrews, T. et al., "Combining Language and Database Advances in an Object-Oriented Development Environment", <i>OOPSLA Proceedings</i> , October 4-8, 1987 , 430-440 | |
| | 2 | Bhattacharya, S. et al., "Coordinating Backup/Recovery and Data Consistency Between Database and File Systems", <i>ACM SIGMOD</i> , June 4-6, 2002 , 500-511 | |
| | 3 | Biliris, A., "The Performance of Three Database Storage Structures for Managing Large Objects", <i>ACM SIGMOD</i> , 1992 , 276-285 | |
| | 4 | Buneman, P. et al., "Inheritance and Persistence in Database Programming Languages", <i>ACM</i> , 1986 , 4-15 | |
| | 5 | Hsiao, H.I. et al., "DLFM: A Transactional Resource Manager", <i>MOD</i> , 2000 , 518-528 | |
| | 6 | Khan, L. et al., "A Performance Evaluation of Storing XML Data in Relational Database Management Systems", <i>WIDM</i> , 2001 , 31-38 | |
| | 7 | Leontiev, Y. et al., "On Type Systems for Object-Oriented Database Programming Languages", <i>ACM Computing Surveys</i> , December 2002 , 34(4), 409-449 | |
| | 8 | Melton, J. et al., "SQL and Management of External Data", <i>SIGMOD Record</i> , March 2001 , 30(1), 70-77 | |
| | 9 | Papiani, M. et al., "A Distributed Scientific Data Archive Using the Web, XML and SQL/MED", <i>SIGMOD Record</i> , September 1999 , 28(3), 56-62 | |
| | 10 | Seshadri, P., "Enhanced Abstract Data Types in Object-Relational Databases", <i>The VLDB Journal</i> , 1998 , 7, 130-140 | |
| EXAMINER | | DATE CONSIDERED | |

| | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office | Docket No. MSFT-2851/306821.01 | Application No. 10/693,158 |
| | Applicant Shankar Pal, et al. | |
| | Filing Date October 24, 2003 | Group Not Yet Assigned |
| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) | | |
| 11 | Varlamis, I. et al., "Bridging XML-Schema and Relational Databases. A System for Generating and Manipulating Relational Databases Using Valid XML Documents", <i>DocEng'OL</i> , November 9-10, 2001 , 105-114 | |
| 12 | Yoshikawa, M. et al., "XRel: A Path-Based Approach to Storage and Retrieval of XML Documents Using Relational Databases", <i>ACM Transactions on Internet Technology</i> , August 2001 , 1(1), 110-141 | |
| 13 | Findler, R.B. et al., "Contract Soundness for Object-Oriented Languages" <i>ACM Conference on Object-Oriented Programming Systems, Languages, and Applications, OOPSLA</i> , 2001 , 15 pages | |
| 14 | Harrison, C.J. et al., "Structure Editors: User-Defined Type Values and Type Inference, <i>IEEE</i> , 2000 , 241-247 | |
| 15 | Michael Stonebraker, "Inclusion of New Types in Relational Data Base Systems", <i>IEEE International Conference on Data Engineering</i> , 1986 , 1-19 | |
| 16 | Berg, C., "How Do I Create Persistent Java Objects?", <i>Dr. Dobb's Journal</i> , 1997 , 22(4), 98-101 | |
| 17 | Chien, A.A., "Concurrent Aggregates (CA)-Design and Experience with a Concurrent Object-Oriented Language Based on Aggregates", <i>J. Parallel and Distributed Computing</i> , 1995 , 25(2), 174-196 | |
| 18 | Darby, C., "Object Serializatin in Java 1.1. Making Objects Persistent", <i>Web Techniques</i> , 1997 , 2(9), 55, 58-59 | |
| 19 | Frost., "Binary-Relational Storage Structures", <i>The Computer Journal</i> , 1982 , 25(3), 358-367 | |
| 20 | Fuh, Y-C. et al., "Implementation of SQL3 Structured Types with Inheritance and Value Substitutability", <i>Digital Symposium Collection</i> , 2000 , Abstract Only, 2 pages | |
| EXAMINER | | DATE CONSIDERED |

| | | | |
|--------------------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| Form PTO-1449 Modified | | Docket No. MSFT-2851/306821.01 | Application No. 10/693,158 |
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| U.S. Department of Commerce Patent and Trademark Office | | Filing Date October 24, 2003 | Group Not Yet Assigned |
| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) | | | |
| | 21 | Haverlock, K., "Object Serialization, Java, and C++", <i>Dr. Dobbs. Journal</i> , 1998, 23(8), 32, 34, 36-37 | |
| | 22 | King, et al., "TriStarp-An Investigation into the Implementation and Exploitation of Binary Relational Storage Structures", <i>Proc. 8 Suppl BNCOD(British National Conference on Data Bases)</i> , 1990, 64-84 | |
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| EXAMINER | | DATE CONSIDERED | |

Form PTO-1449 Modified

List of Patent and Publications
Cited by Applicant
(Use several sheets if necessary)

U.S. Department of Commerce
Patent and Trademark Office

Docket No.
MSFT-2851/306821.01

Application No.
10/693,158

Applicant
Shankar Pal, et al.

Filing Date
October 24, 2003

Group
2171

U. S. PATENT DOCUMENTS

| Examiner Initial | | Document No. | Date | Name | Class | Subclass |
|------------------|----|-----------------|----------|------------------|-------|----------|
| | 23 | 6,505,211 | 01/07/03 | Dessloch, et al. | 707 | 103Y |
| | 24 | 6,199,100 | 03/06/01 | Filepp, et al. | 709 | 203 |
| | 25 | 6,223,344 | 04/24/01 | Gerard, et al. | 717 | 170 |
| | 26 | 6,708,196 | 03/16/04 | Atkinson, et al. | 718 | 102 |
| | 27 | 5,297,279 | 03/22/94 | Bannon, et al. | 707 | 103 |
| | 28 | 5,437,027 | 07/25/95 | Bannon, et al. | 395 | 600 |
| | 29 | 5,864,862 | 01/26/99 | Kriens, et al. | 707 | 103 |
| | 30 | 6,564,205 | 05/13/03 | Iwata, et al. | 707 | 2 |
| | 31 | 2002/0198891 A1 | 12/26/02 | Li, et al. | 707 | 102 |
| | 32 | 5,900,870 | 05/04/99 | Malone, et al. | 715 | 866 |

FOREIGN PATENT DOCUMENTS

| Examiner Initial | | Document No. | Date | Country | Translation | |
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U. S. PATENT DOCUMENTS

| Examiner Initial | | Document No. | Date | Name | Class | Subclass |
|------------------|----|-----------------|----------|--------------------|-------|----------|
| | 33 | 6,047,291 | 04/04/00 | Anderson, et al. | 707 | 103 |
| | 34 | 6,112,024 | 08/29/00 | Almond, et al. | 717 | 122 |
| | 35 | 6,199,195 | 03/06/01 | Goodwin, et al. | 717 | 104 |
| | 36 | 6,338,056 | 01/08/02 | Dessloch, et al. | 707 | 2 |
| | 37 | 6,370,541 | 04/09/02 | Chou, et al. | 707 | 103 |
| | 38 | 6,519,597 | 02/11/03 | Cheng, et al. | 707 | 10 |
| | 39 | 6,556,983 | 04/29/03 | Altschuler, et al. | 706 | 55 |
| | 40 | 6,578,046 | 06/10/03 | Chang, et al. | 707 | 4 |
| | 41 | 6,772,178 | 08/03/04 | Mandal, et al. | 707 | 204 |
| | 42 | 6,108,004 | 08/22/00 | Medl | 715 | 804 |
| | 43 | 2002/0091702 A2 | 07/11/02 | Mullins | 707 | 100 |
| | 44 | 2002/0152422 A1 | 10/17/02 | Sharma, et al. | 714 | 13 |

FOREIGN PATENT DOCUMENTS

| Examiner Initial | | Document No. | Date | Country | Translation | |
|------------------|--|--------------|------|---------|-------------|----|
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